

## **REMARKS**

Claims 1-12 are now pending in the application. Claims 1-5 stand rejected. Claim 1 has been amended, and Claims 6-12 are new. Support for the amendment and new claims can be found throughout the application, drawings and claims as originally filed and, as such, no new matter has been presented. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendment, new claims and remarks contained herein.

## **SPECIFICATION**

The specification stands objected to for certain informalities. Applicant has amended the specification according to the Examiner's suggestions. In addition, Applicants have attached herewith a substitute specification that includes the spacing as requested by the Examiner. Therefore, reconsideration and withdrawal of this objection are respectfully requested.

## **REJECTION UNDER 35 U.S.C. §§ 102 AND 103**

Claims 1, 2, 4 and 5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Matsuda et al. (U.S. Pat. No. 5,688,252; hereinafter "Matsuda"). Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuda. These rejections are respectfully traversed.

Initially, Applicant notes that Matsuda discloses a two-component type pre-filled syringe K1, which includes a tubular body 1, a slidable gasket 2, a plunger body 3, and a finger support 11. The gasket 2 can be slidably received within the tubular body 1,

and is wholly contained within the gasket 2 to form a seal for the second end of the tubular body 1. The gasket 2 can include female screw portions 21, which can be formed near a central axis of the gasket 2. The plunger body 3 can include a male screw portion 31 at a first end of the plunger body 3. The male screw portion 31 can engage the gasket 2 to enable the plunger body 3 to move the gasket 2 relative to the tubular body 1. In contrast to Matsuda, independent Claim 1 has been amended to recite:

...a syringe plunger disposed in the space and coupled to **a first end** of a plunger rod having an **outer thread** that is **formed between the first end and a second end**;

a thread system that cooperates with the plunger rod and with the finger support, the thread system having a thread sleeve with an internal thread that cooperates with an outer thread on the plunger rod, the thread sleeve being detachably connected with the finger support and coupled with the plunger rod for common displacement into the inner space (emphasis added).

In view of the above, Applicant respectfully asserts that the cited art does not teach, suggest or disclose each and every element of at least independent Claim 1. In this regard, Matsuda does not teach, suggest or disclose a syringe plunger disposed in the space and coupled to **a first end** of a plunger rod having **an outer thread** that is **formed between the first end and a second end**, as claimed in Claim 1. Rather, Matsuda discloses that the male screw threads 31 are formed at the first end of the plunger body 3, to enable the plunger body 3 to be coupled to the gasket 2. Applicant notes that it would be improper to modify Matsuda to include an outer thread being formed between a first end and a second end as claimed, as it would change the principle of operation of Matsuda.

Accordingly, in view of at least the above discussion, Applicant respectfully submit that the cited art does not teach, suggest or disclose each and every element of at least independent Claim 1, and thus, Applicant respectfully requests the Office to reconsider and withdraw the rejection of independent Claim 1 under 35 U.S.C. § 102(b).

In addition, since Claims 2-5 depend directly from independent Claim 1, Claims 2-5 should be in condition for allowance for at least the reasons set forth for Claim 1 above. Accordingly, Applicant respectfully requests the Office reconsider and withdraw the rejections of Claims 2-5 under 35 U.S.C. §§ 102(b) and 103(a).

#### **NEW CLAIM**

Applicant has added new Claims 6-12 to further define Applicant's teachings. Support for these new claims can be found in Applicant's specification and drawings as filed, and in at least Figs. 1-4. As such, these new claims do not constitute new matter. In addition, Applicant respectfully submits that new Claim 6 has independently allowable subject matter as the cited art does not teach, suggest or disclose at least a plunger rod having a first end coupled to the syringe plunger and a second end, the plunger rod including a thread formed on an outer surface of the plunger rod, the thread formed a distance from the first end, as discussed. Applicant respectfully submits that new Claim 7 has independently allowable subject matter as the cited art does not teach, suggest or disclose that the plunger rod is axially displaced in the inner space to move the plunger towards the end plug in order to engage the inner thread with the outer thread. Further, Applicant respectfully submits that new Claim 8 has independently allowable subject matter as the cited art does not teach, suggest or disclose that the movement of the

plunger rod within the inner space towards the end cap after the membrane ruptures detaches the thread sleeve from the finger support. Applicant respectfully submits that new Claim 9 has independently allowable subject matter as the cited art does not teach, suggest or disclose that the thread sleeve is pressed into the base of the finger support. In addition, Applicant respectfully submits that new Claim 10 has independently allowable subject matter as the cited art does not teach, suggest or disclose that the engagement of the inner thread and outer thread increases the pressure in the inner space. Applicant respectfully submits that new Claim 11 has independently allowable subject matter as the cited art does not teach, suggest or disclose that the increase in pressure causes the membrane to bulge and contact a pin coupled to the end plug that ruptures the membrane. In addition, Applicant respectfully submits that new Claim 12 has independently allowable subject matter as the cited art does not teach, suggest or disclose that the outer thread is formed a distance from the first end, as discussed. Prompt and favorable consideration of these new claims are hereby respectfully requested.

## **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner

believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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